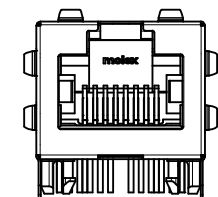
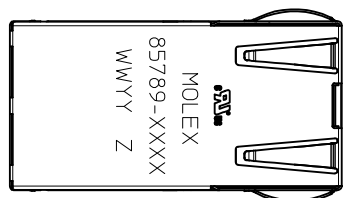
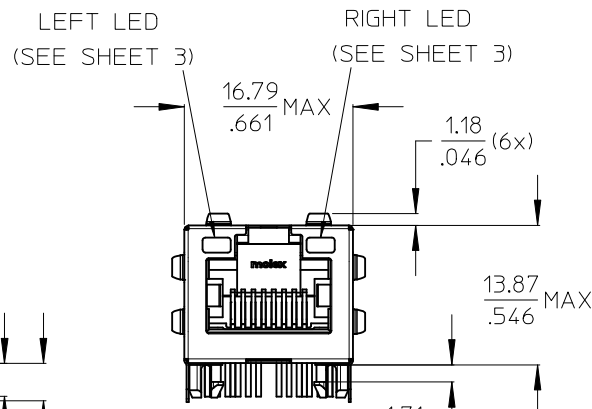


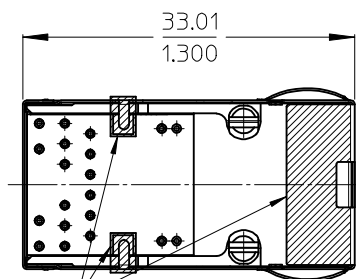
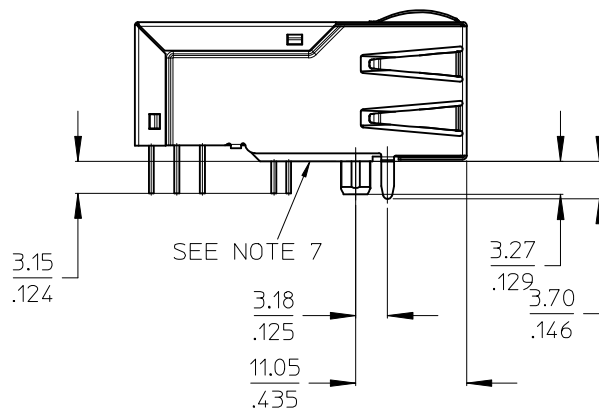
GIGABIT SINGLE PORT MAGNETIC JACK
PoE+ MAGNETICS ACC. TO IEEE802.3at
FOR PSE OR PD APPLICATIONS



FRONT VIEW
 NON LED VERSION
 P/N 85789-1020



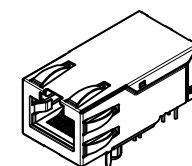
FRONT VIEW
 LED VERSION
 P/N SEE BOM ON SHEET 3



SEE NOTE 9

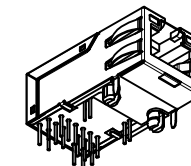
NOTES:

- 1 - SHIELD MATERIAL: STAINLESS STEEL
(GROUND PINS ARE SOLDER DIPPED)
- 2 - PLASTIC MATERIAL: PBT, BLACK, UL 94V-0
- 3 - TERMINALS MATERIAL: PHOSPOR BRONZE
RJ45 CONTACTS PLATING: 0.76 MICROMETER GOLD
OVER 1.9 MICROMETER NICKEL ON MATING AREA
SOLDER TERMINALS: 3 MICROMETER TIN
- 4 - MATING INTERFACE ACCORDING TO IEC 60603-7
- 5 - PRODUCT SPECIFICATION: PS-85789-001
- 6 - PACKAGING SPECIFICATION: PK-85759-001
- 7 - STAND OFF TO SYSTEM BOARD
- 8 - RECOMMENDED PCB THICKNESS: 1.6mm / 0.067inch
- 9 - SHIELD AND SHIELD LATCHES: AVOID TO ROUTE
TRACES OR TO PLACE ANY VIAS OR PADS IN THIS AREA.
- 10 - INSCRIPTION MARKED BY LASER:
UL LOGO
1st : MOLEX
2st : P/N (SEE BOM)
3rd : DATE CODE(WEEK/YEAR)
Z=> MANUFACTURER CODE



NON LED VERSION

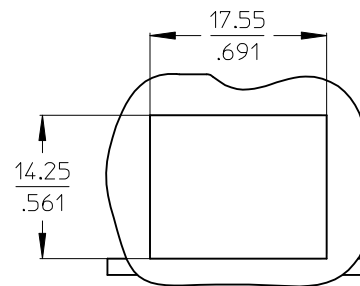
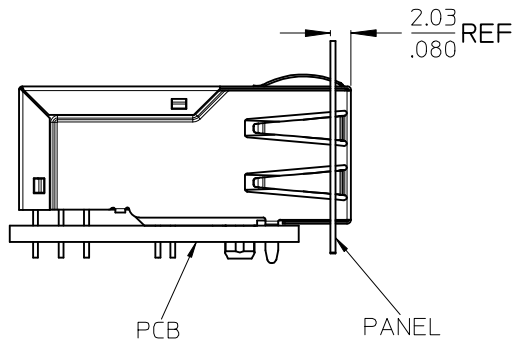
SCALE 1:1



LED VERSION

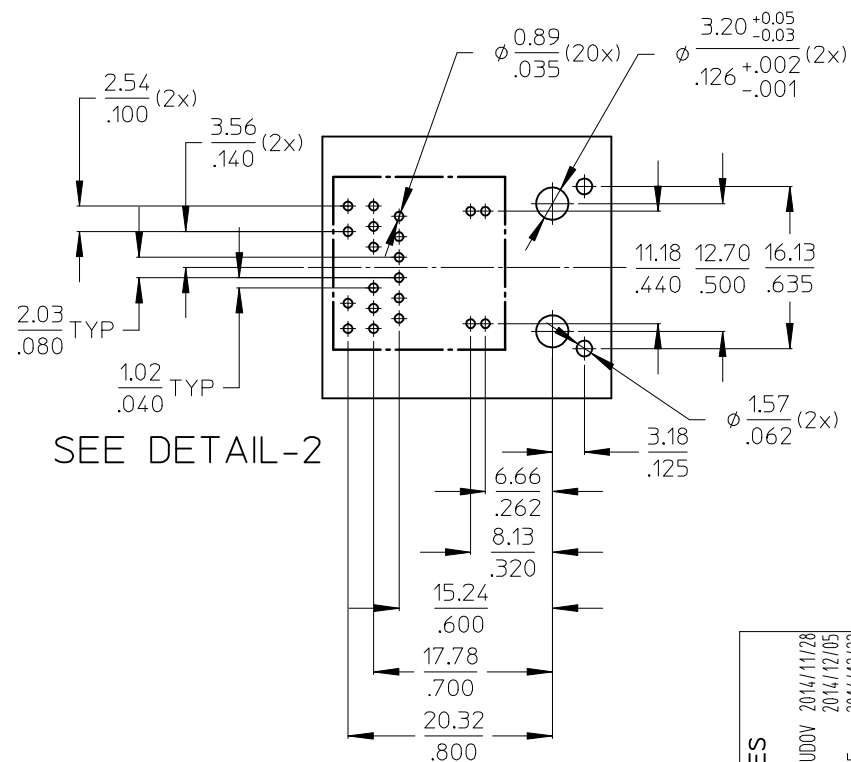
SCALE 1:1

NOTES UPDATE	EC NO: DRWN:MMANGARUDOV 2014/11/28 CHKD:DBYRNES 2014/12/05 APPR:SSTE INKE 2014/12/22	DESCRIPTION	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION		
						MM/IN		2:1	METRIC			
					mm	INCH	DRAWN BY	DATE	TITLE			
				4 PLACES	± ---	± ---	JBADER	2010/01/14				
				3 PLACES	± ---	± .010	CHECKED BY	DATE	GIGABIT MAGNETIC JACK POE PLUS ENABLED 1X1			
				2 PLACES	± 0.25	± .020	MMANGARUDOV	2010/01/14				
				1 PLACE	± 0.5	± ---	APPROVED BY	DATE			molex	
				0 PLACE	±	±	SSTE INKE	2010/03/09				
				ANGULAR ± .5 °		MATERIAL NO.		DOCUMENT NO.		SHEET NO.		
				DRAFT WHERE APPLICABLE		SEE SHEET 3/4		SD-85789-001		1 OF 4		
MUST REMAIN WITHIN DIMENSIONS		SIZE A3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION								

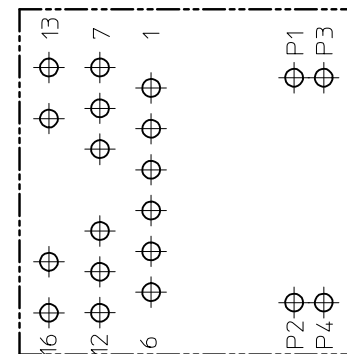


SUGGESTED PANEL CUTOUT

SUGGESTED BOARD LAYOUT - COMPONENT SIDE



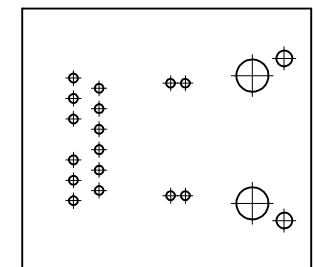
PIN CONFIGURATION



DETAIL-2

SCALE 4:1

SUGGESTED BOARD LAYOUT
NON LED VERSION



NO CHANGES	EC NO: D	DESCRIPTION REV	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)			DIMENSION STYLE MM/IN		SCALE 2:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION				
							DRAWN BY JBADER		DATE 2010/01/14	TITLE GIGABIT MAGNETIC JACK POE PLUS ENABLED 1X1					
							CHECKED BY MMANGARUDOV		DATE 2010/01/14						
							APPROVED BY SSTEINKE		DATE 2010/03/09						
				ANGULAR ± .5 °			MATERIAL NO.		DOCUMENT NO.					SHEET NO.	
				DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			SEE SHEET 3/4		SD-85789-001					2 OF 4	
							THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION								

F

E

D

C

B

A

F

E

D

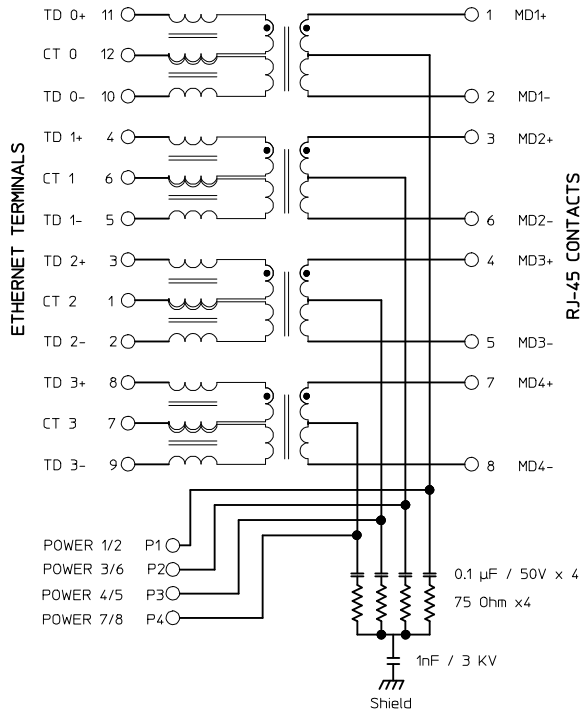
C

B

A

Electrical Specifications @25°C		
Operating temperature (0°C to +70°C)		
Description	Value	
OCL POE+TRANSF. 20mA bias (0°C to +70°C)	350μH min.	
OCL NONPOE TRANSF. 8mA bias (0°C to +70°C)	350μH min.	
Turns Ratio	1CT:1CT	
Insertion Loss		
Frequency (MHz)	Limits (dB max.)	Typical Values (dB max.)
1.0-9.9 MHz	0.4+0.1*log(F)	0.5 @ 10MHz
10-49.9 MHz	0.5+0.3*log(F/10)	0.7 @ 50MHz
50-79.9 MHz	1+1.4*log(F/80)	1.0 @ 80MHz
80-100 MHz	1.3+3*log(F/100)	1.3 @ 100MHz
Return Loss		
Frequency (MHz)	Limits (dB min.)	TYPICAL Values (dB min.)
1-9.9 MHz	27dB min.	27 @ 10MHz
10-100 MHz	27-17*log(F/10)	10 @ 100MHz
CMR		
Frequency (MHz)	Limits (dB min.)	TYPICAL Values (dB min.)
1-9.9 MHz	34dB min.	34 @ 10MHz
10-79.9 MHz	27dB min.	27 @ 80MHz
80-199.9 MHz	27-14.5*log(F/80)	21.5 @ 200MHz
200-399.9 MHz	21.5-39*log(F/200)	10 @ 400MHz
400-1000 MHz	10	10 @ 1000MHz
NEXT		
Frequency (MHz)	Limits (dB min.)	TYPICAL Values (dB min.)
1-5.9 MHz	50	50 @ 6MHz
6-49.9 MHz	45-16*log(F/10)	34 @ 50MHz
50-100 MHz	25-30*log(F/100)	25 @ 100MHz
Isolation PHY to Wire side	2.25kVDC/60sec	

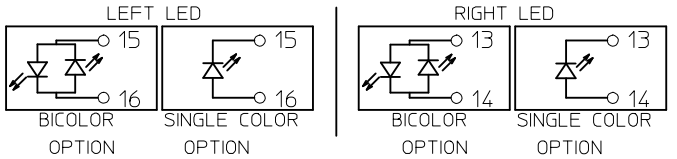
PHY SIDE / PCB SIDE ETHERNET MAGNETICS WIRE SIDE / RJ45



PART NUMBER	LED1 POLARITY			LED2 POLARITY		
	LEFT LED			RIGHT LED		
	PIN15	PIN16	COLOR	PIN13	PIN14	COLOR
85789-1001	-	+	GREEN	-	+	GREEN
85789-1003	-	+	GREEN	-	+	GREEN
85789-1006	-	+	GREEN	-	+	YELLOW
85789-1007	-	+	GREEN	-	+	GREEN
85789-1012	-	+	YELLOW	-	+	GREEN
85789-1013	-	+	YELLOW	-	+	YELLOW
85789-1014	-	+	YELLOW	-	+	GREEN
85789-1015	-	+	YELLOW	-	+	GREEN
85789-1017	-	+	GREEN	-	+	YELLOW
85789-1020	NON LED					

ADDITIONAL LED COLORS AND CONFIGURATIONS
AVAILABLE ON REQUEST

SEE TABLE FOR
LED OPTIONS



NO CHANGES EC NO: DRWN:MWANGARUDOV 2014/11/28 CHKD:DBYRNES 2014/12/05 APPR:SSTEINKE 2014/12/22	DESCRIPTION	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM/IN		SCALE 5:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION			
				mm	INCH	DRAWN BY JBADER	DATE 2010/01/14	TITLE GIGABIT MAGNETIC JACK POE PLUS ENABLED 1X1				
			4 PLACES	± ---	± ---	CHECKED BY	DATE					
			3 PLACES	± ---	± .010	MMANGARUDOV	2010/01/14					
			2 PLACES	± 0.25	± .020	APPROVED BY	DATE	molex				
			1 PLACE	± 0.5	± ---	SSTEINKE	2010/03/09					
			0 PLACE	±	±	MATERIAL NO.	DOCUMENT NO.				SD-85789-001	SHEET NO. 3 OF 4
			ANGULAR ± .5 °		SEE BOM							
			DRAFT WHERE APPLICABLE		SIZE A3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					
			MUST REMAIN WITHIN DIMENSIONS									

F

E

D

C

B

A

F

E

D

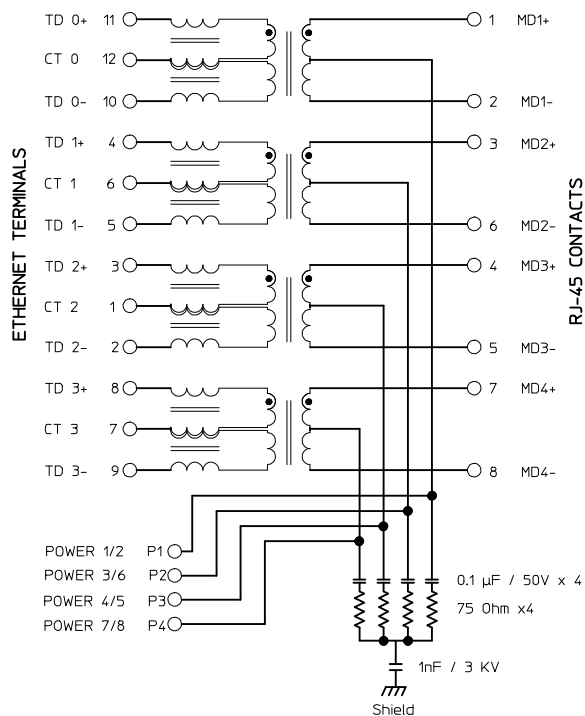
C

B

A

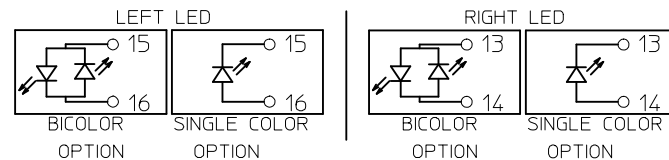
Electrical Specifications @25°C		
Operating temperature (-40°C to +85°C)		
Description	Value	
OCL POE+TRANSF. 20mA bias (-40°C to +85°C)	350uH min.	
OCL NONPOE TRANSF. 8mA bias (-40°C to +85°C)	350uH min.	
Turns Ratio	1CT:1CT	
Insertion Loss		
Frequency (MHz)	Limits (dB max.)	Typical Values (dB max.)
1.0-9.9 MHz	0.4+0.1*log(F)	0.5 @ 10MHz
10-49.9 MHz	0.5+0.3*log(F/10)	0.7 @ 50MHz
50-79.9 MHz	1+1.4*log(F/80)	1.0 @ 80MHz
80-100 MHz	1.3+3*log(F/100)	1.3 @ 100MHz
Return Loss		
Frequency (MHz)	Limits (dB min.)	TYPICAL Values (dB min.)
1-9.9 MHz	27dB min.	27 @ 10MHz
10-100 MHz	27-17*log(F/10)	10 @ 100MHz
CMR		
Frequency (MHz)	Limits (dB min.)	TYPICAL Values (dB min.)
1-9.9 MHz	34dB min.	34 @ 10MHz
10-79.9 MHz	27dB min.	27 @ 80MHz
80-199.9 MHz	27-14.5*log(F/80)	21.5 @ 200MHz
200-399.9 MHz	21.5-39*log(F/200)	10 @ 400MHz
400-1000 MHz	10	10 @ 1000MHz
NEXT		
Frequency (MHz)	Limits (dB min.)	TYPICAL Values (dB min.)
1-5.9 MHz	50	50 @ 6MHz
6-49.9 MHz	45-16*log(F/10)	34 @ 50MHz
50-100 MHz	25-30*log(F/100)	25 @ 100MHz
Isolation PHY to Wire side	2.25kVDC/60sec	

PHY SIDE / PCB SIDE ETHERNET MAGNETICS WIRE SIDE / RJ45



PART NUMBER	LED1 POLARITY			LED2 POLARITY		
	LEFT LED			RIGHT LED		
	PIN15	PIN16	COLOR	PIN13	PIN14	COLOR
85789-3006	-	+	GREEN	-	+	YELLOW
85789-3016	-	+	GREEN	+	-	GREEN
	+	-	YELLOW			

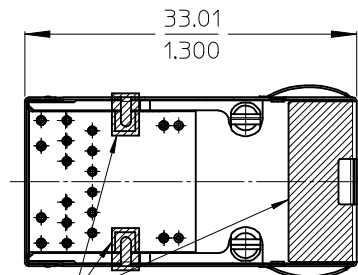
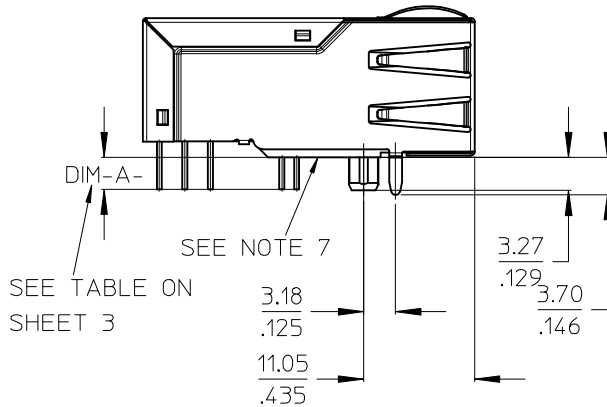
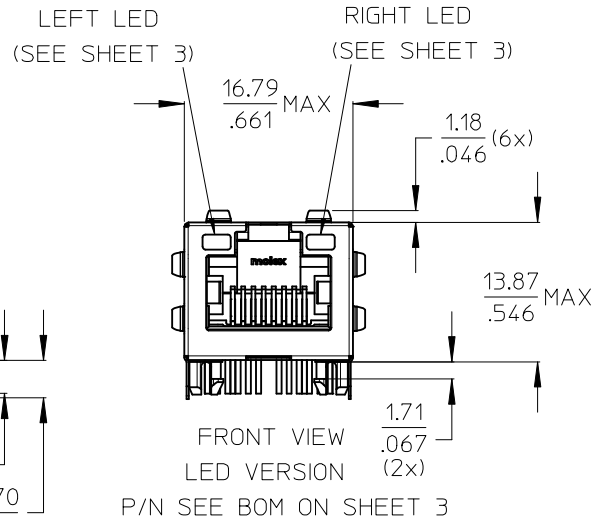
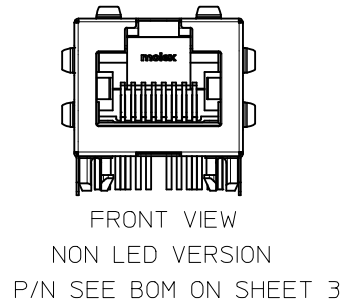
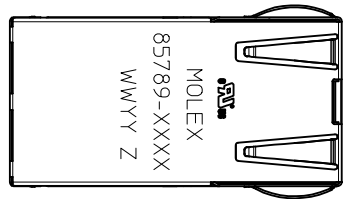
ADDITIONAL LED COLORS AND CONFIGURATIONS
AVAILABLE ON REQUEST



SEE TABLE FOR LED OPTIONS

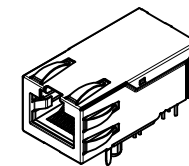
BOM CHANGED EC NO: 0 DRAWN:MANGARUDOV 2014/11/28 CHKD:DBYRNES 2014/12/05 APPR:SSTEINKE 2014/12/22		QUALITY SYMBOLS ▽=0 ▽=0	DESCRIPTION	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM/IN		SCALE 5:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
REV	D	DESCRIPTION	QUALITY SYMBOLS	mm		INCH		DRAWN BY		DATE	
				4 PLACES ± --- ± ---		JBADER		2010/01/14			
				3 PLACES ± --- ± .010		CHECKED BY		DATE			
				2 PLACES ± 0.25 ± .020		MMANGARUDOV		2010/01/14			
REV	D	DESCRIPTION	QUALITY SYMBOLS	1 PLACE ± 0.5 ± ---		APPROVED BY		DATE		TITLE GIGABIT MAGNETIC JACK POE PLUS ENABLED 1X1	
				0 PLACE ± ±		SSTEINKE		2010/03/09			
				ANGULAR ± .5 °		MATERIAL NO.		DOCUMENT NO.		SHEET NO.	
				DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE BOM		SD-85789-001		4 OF 4	
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION											

GIGABIT SINGLE PORT MAGNETIC JACK
PoE+ MAGNETICS ACC. TO IEEE802.3at
FOR PSE OR PD APPLICATIONS



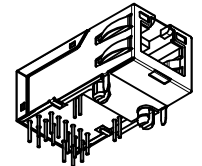
NOTES:

- 1 - SHIELD MATERIAL: STAINLESS STEEL
(GROUND PINS ARE SOLDER DIPPED)
- 2 - PLASTIC MATERIAL: PBT, BLACK, UL 94V-0
- 3 - TERMINALS MATERIAL: PHOSPOR BRONZE
RJ45 CONTACTS PLATING: 0.76 MICROMETER GOLD
OVER 1.9 MICROMETER NICKEL ON MATING AREA
SOLDER TERMINALS: 3 MICROMETER TIN
- 4 - MATING INTERFACE ACCORDING TO IEC 60603-7
- 5 - PRODUCT SPECIFICATION: PS-85789-001
- 6 - PACKAGING SPECIFICATION: PK-85759-001
- 7 - STAND OFF TO SYSTEM BOARD
- 8 - RECOMMENDED PCB THICKNESS: 1.6mm / 0.067inch
- 9 - SHIELD AND SHIELD LATCHES: AVOID TO ROUTE TRACES OR TO PLACE ANY VIAS OR PADS IN THIS AREA.
- 10 - INSCRIPTION MARKED BY LASER:
UL LOGO
1st : MOLEX
2st : P/N (SEE BOM)
3rd : DATE CODE(WEEK/YEAR)
Z=> MANUFACTURER CODE



NON LED VERSION

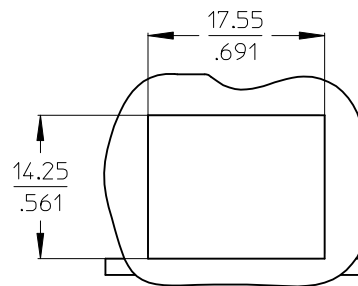
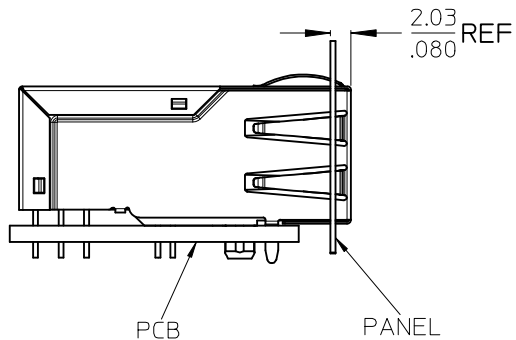
SCALE 1:1



LED VERSION

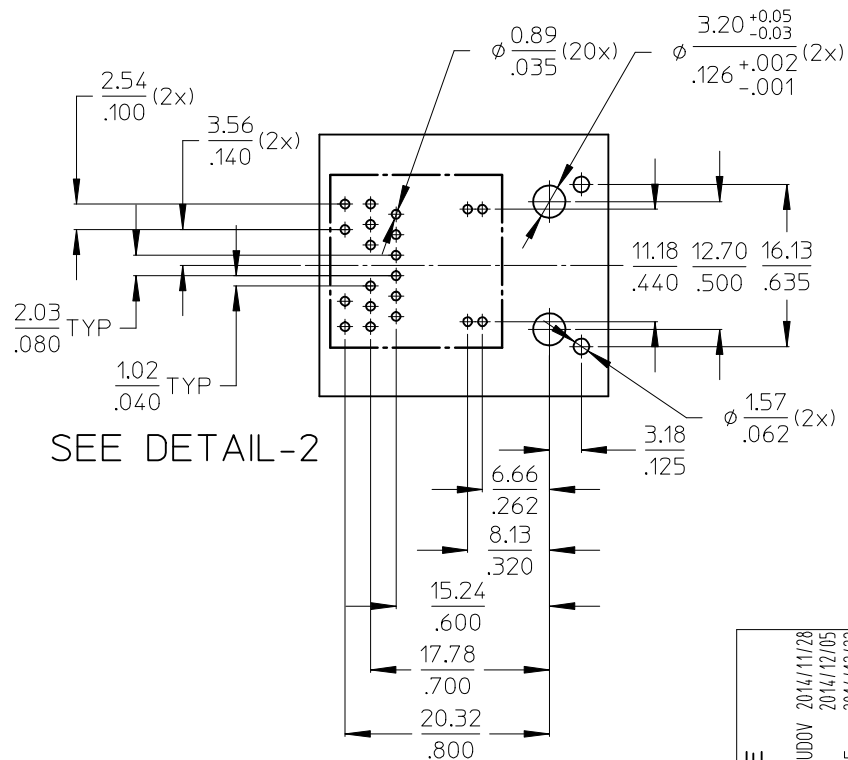
SCALE 1:1

NOTES UPDATE		QUALITY SYMBOLS		GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
EC NO:	REV	DESCRIPTION	SYMBOLS	mm	INCH	MM/IN	DATE	2:1	METRIC	DATE	DATE
DRWN:MMANGARUDOV	2014/11/28		▽=0	4 PLACES	± ---	± ---	JBADER			2014/04/25	
CHKD:DBYRNES	2014/12/05		▽=0	3 PLACES	± ---	± .010	CHECKED BY			DATE	
APPR:SSTE INKE	2014/12/22			2 PLACES	± 0.25	± .020	MMANGARUDOV			2014/05/05	
				1 PLACE	± 0.5	± ---	APPROVED BY			DATE	
				0 PLACE	±	±	SSTE INKE			2014/06/11	
				ANGULAR ± .5 °		MATERIAL NO.		DOCUMENT NO.		SHEET NO.	
				DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE SHEET 3		GIGABIT MAGNETIC JACK POE PLUS ENABLED 1X1		1 OF 3	
						THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					

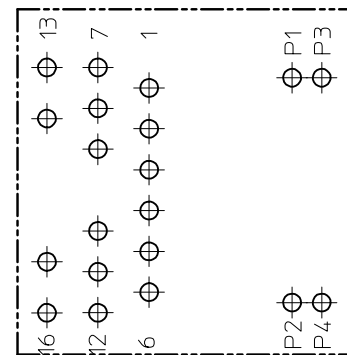


SUGGESTED PANEL CUTOUT

SUGGESTED BOARD LAYOUT - COMPONENT SIDE



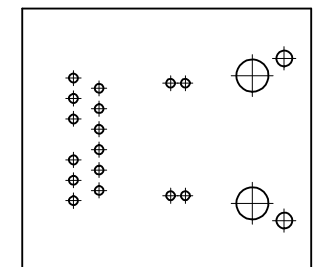
PIN CONFIGURATION



DETAIL-2

SCALE 4:1

SUGGESTED BOARD LAYOUT
NON LED VERSION



NO CHANGE	EC NO: B	DESCRIPTION REV	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM/IN		SCALE 2:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION 		
						DRAWN BY JBADER	DATE 2014/04/25	TITLE GIGABIT MAGNETIC JACK POE PLUS ENABLED 1X1				
						CHECKED BY MMANGARUDOV	DATE 2014/05/05					
						APPROVED BY SSTEINKE	DATE 2014/06/11					
				ANGULAR ± .5 °		MATERIAL NO.		DOCUMENT NO.		SHEET NO.		
				DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE SHEET 3		SD-85789-401		2 OF 3		
				THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION								

10

9

8

7

6

5

4

3

2

1

Electrical Specifications @25°C

Operating temperature (-40°C to +85°C)

Description	Value	
OCL POE+TRANSF. 20mA bias (-40°C to +85°C)	350μH min.	
OCL NONPOE TRANSF. 8mA bias (-40°C to +85°C)	350μH min.	
Turns Ratio	1CT:1CT	
Insertion Loss		
Frequency (MHz)	Limits (dB max.)	Typical Values (dB max.)
1.0-9.9 MHz	0.4+0.1*log(F)	0.5 @ 10MHz
10-49.9 MHz	0.5+0.3*log(F/10)	0.7 @ 50MHz
50-79.9 MHz	1+1.4*log(F/80)	1.0 @ 80MHz
80-100 MHz	1.3+3*log(F/100)	1.3 @ 100MHz
Return Loss		
Frequency (MHz)	Limits (dB min.)	TYPICAL Values (dB min.)
1-9.9 MHz	27dB min.	27 @ 10MHz
10-100 MHz	27-17*log(F/10)	10 @ 100MHz
CMR		
Frequency (MHz)	Limits (dB min.)	TYPICAL Values (dB min.)
1-9.9 MHz	34dB min.	34 @ 10MHz
10-79.9 MHz	27dB min.	27 @ 80MHz
80-199.9 MHz	27-14.5*log(F/80)	21.5 @ 200MHz
200-399.9 MHz	21.5-39*log(F/200)	10 @ 400MHz
400-1000 MHz	10	10 @ 1000MHz
NEXT		
Frequency (MHz)	Limits (dB min.)	TYPICAL Values (dB min.)
1-5.9 MHz	50	50 @ 6MHz
6-49.9 MHz	45-16*log(F/10)	34 @ 50MHz
50-100 MHz	25-30*log(F/100)	25 @ 100MHz
Isolation PHY to Wire side	2.25kVDC/60sec	

PHY SIDE / PCB SIDE ETHERNET MAGNETICS

WIRE SIDE / RJ45

ETHERNET TERMINALS

TD 0+ 11

CT 0 12

TD 0- 10

TD 1+ 4

CT 1 6

TD 1- 5

TD 2+ 3

CT 2 1

TD 2- 2

TD 3+ 8

CT 3 7

TD 3- 9

1 MD1+

2 MD1-

3 MD2+

6 MD2-

4 MD3+

5 MD3-

7 MD4+

8 MD4-

POWER 1/2 P1

POWER 3/6 P2

POWER 4/5 P3

POWER 7/8 P4

0.1 μF / 50V x 4

75 Ohm x4

1nF / 3 KV

Shield

PART NUMBER

DIM-A-SHEET 1

LED1 POLARITY

LED2 POLARITY

85789-4008	2.50mm	LEFT LED			RIGHT LED		
		PIN15	PIN16	COLOR	PIN13	PIN14	COLOR
85789-4020	2.50mm	-	+	GREEN	-	+	GREEN
		+	-	YELLOW	+	-	YELLOW
85789-4020		2.50mm		NON LED			

ADDITIONAL LED COLORS AND CONFIGURATIONS ARE AVAILABLE ON REQUEST

LEFT LED

RIGHT LED

BICOLOR OPTION

SINGLE COLOR OPTION

BICOLOR OPTION

SINGLE COLOR OPTION

SEE TABLE FOR LED OPTIONS

BOM UPDATE

EC NO:

DRWN:MANGARUDOV 2014/11/28

CHKD:DBYRNES 2014/12/05

APPR:SSTEINKE 2014/12/22

REV

QUALITY SYMBOLS

DESCRIPTION

REV

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± .010
2 PLACES	± 0.25	± .020
1 PLACE	± 0.5	± ---
0 PLACE	±	±

ANGULAR ± .5 °

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE

MM/IN

DRAWN BY	DATE
JBADER	2014/04/25
CHECKED BY	DATE
MMANGARUDOV	2014/05/05
APPROVED BY	DATE
SSTEINKE	2014/06/11

MATERIAL NO.

SEE BOM

SIZE

A3

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

SCALE

5:1

DESIGN UNITS

METRIC

THIRD ANGLE PROJECTION

TITLE

GIGABIT MAGNETIC JACK

POE PLUS ENABLED 1X1

molex

SD-85789-401

3 OF 3

DOCUMENT NO.

SHEET NO.

ib_frame_A3_P_AM_T

Rev E1 2012/01/25

9

8

7

6

5

4

3

2

1



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.